Section Number	Title
21 00 00	**FIRE SUPPRESSION**
21 10 00	**WATER-BASED FIRE SUPPRESSION SYSTEMS**
21 11 00	**Facility Fire-suppression Water-Service Piping**
21 11 16	Facility Fire Hydrants
21 20 00	**FIRE-EXTINGUISHING SYSTEMS**
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21 00 00 FIRE SUPPRESSION

Part 1 – General

PLEASE REFERENCE THE NAU FIRE MARSHAL WEBSITE FOR FURTHER INFORMATION https://in.nau.edu/environmental-health-and-safety/safety-programs/office-of-the-fire-marshal/, INCLUDING FIRE CODE.

Part 2 – Products
N/A

Part 3 – Execution

Kitchen Hood Fire Suppression Systems
System Designer: Fire suppression system plans and specifications shall be developed in accordance with NFPA 17A by persons who are experienced in the proper design, application, installation and testing of wet chemical fire suppression systems.

System Installer: Installation personnel shall be supervised by persons who are qualified and experienced in the installation, inspection and testing of fire alarm systems. Qualified personnel shall include, but not limited to, the following:

a. Personnel who are factory trained and certified for the fire suppression installation of the specific type and brand being installed,
b. Personnel who are certified by a nationally recognized fire suppression certification organization,
c. Personnel who are registered, licensed or certified by a State or local authority.

System Requirements: All exposed piping, fittings, and conduit shall be chrome or chrome sleeved.

Contractor shall provide a two (2) year warranty on all system equipment and installation.

21 10 00 WATER-BASED FIRE SUPPRESSION SYSTEMS

Part 1 – General

A pre-construction meeting shall take place to discuss FLS expectations and standards at which time permits will be issued.

Job site foreman shall hold an accredited certification from an organization that certifies their knowledge and ability to supervise the installation, inspection, testing and maintenance of fire suppression systems.

Automatic Building Fire Suppression

Heat tracing for fire suppression piping exposed to freezing conditions will not be specified for new buildings and shall be replaced wherever possible in renovations.

Design wet pipe sprinkler systems, unless installed in areas subject to freezing.

Provide access panels for all hidden valves. Panels shall be labeled to the type of valve accessed from the panel.

Specify drain valves for each low loop of the system. Drain valves shall be piped to the exterior of the building or to a floor sink.

Part 2 – Products

Low pressure dry valves shall not be used.

Part 3 – Execution

Protective shipping caps shall be used to provide protection from over-spray and paint during construction.

All hydrostatic and pressure testing shall be performed by contractor per NFPA 13/25.

Waterproof flex and electrical boxes shall be used and installed in a manner as to avoid water damage during inspection, testing and maintenance of fire protections systems.

Automatic check valves and drains shall be piped in a way as to not cause water damage to interior of building and supports required inspection, testing, and maintenance per NFPA 13/25.

Sprinkler heads shall be installed in a way as to avoid loading from ceiling fans, cooktops, and vents.

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All sprinkler components that require inspection, testing, and maintenance per NFPA 25 standards shall be installed in a manner that allows technicians to easily and safely perform scheduled work.

Installer shall provide an approved set of drawings to the inspector during scheduled and unscheduled inspections.

Drains, inspector's tests, hydrant flows and backflow tests shall be designed in a way that does not cause damage to the exterior of the building or landscaping.

All electrical equipment shall have a dedicated circuit and be hard wired.

All new dry pipe systems shall include a control valve above the dry valve to allow for testing of the system without flooding the pipe. This valve shall also be supervised.

All new dry pipe systems shall include a nitrogen generator to prevent corrosion and extend the usable life of the system.

Existing system shut-down shall be coordinated with Owner (Fire Life Safety) at 928-5234227.

Contractor shall complete and provide: Contractor's material and test certificate for underground, and above ground piping.

21 11 16 Facility Fire Hydrants

Owner has pre-approved the following manufacturer and product: American – Waterous Pacer.

Owner's standard is a blue barrel and a gold bonnet. Coordinate specific colors with Owner.

21 20 00 FIRE-EXTINGUISHING SYSTEMS

21 22 00 CLEAN-AGENT FIRE EXTINGUISHING SYSTEMS

Part 1 – General

Installer qualifications: Installation contractor shall be a factory certified authorized distributor.

System designer – Fire suppression system plans, and specifications shall be developed in accordance with NFPA 2001 by persons who are experienced in the proper design, application, installation, and testing of clean agent fire suppression systems.

System installer – installation personnel shall be supervised by persons who are qualified and experienced in the installation, inspection and testing of fire alarms systems. Qualified personnel shall include but not limited to, the following:

a. Personnel who are factory trained and certified for the suppression installation of the specific type and brand being installed,
b. Personnel who are certified by a nationally recognized fire suppression certification organization,
c. Personnel who are registered, licensed and certified by a State or local authority.

Part 2 – Products

N/A

Part 3 – Execution

System Requirements: All detection and control/release system junction boxes shall be painted red and "J" box covers shall be labeled in bold 1" black decal letters "F/P".

At system acceptance the Contractor shall provide all relevant manual(s), technical/maintenance manual(s), and an accurate map and AutoCAD compatible file on system component location along with device identification and address. The Contractor shall provide certificate of completion and provide two (2) copies of the complete system programming disc and sequence of events.

Contractor shall provide a two (2) year warranty on all system components, programming and installation.

Contractor shall have an in-place support facility with technical staff, spare parts inventory, and all necessary test and diagnostic equipment. Contractor shall provide 2-hour emergency response time.

****END OF SECTION****